

**IEEE CINCINNATI
SECTION
NEWSLETTER
NOV./DEC. 2003**



DECEMBER MEETING

Tour of the American Watchmakers - Clockmakers Institute

- DATE:** Thursday, December 4, 2003
- PLACE :** American Watchmakers - Clock Institute, 701 Enterprise Dr., Harrison, OH (see below for directions).
- TIME :** 5:30 p.m. to 7:00 p.m. - Social Time/Dinner at the Cabaret Club & Banquet Center
7:00 p.m. to 8:30 p.m. - Tour
- COST FOR DINNER:** \$15.50 which includes dinner, soft drinks/coffee, tax & gratuity.
- MENU:** Roast Beef, Marinated Chicken Breast, Whipped Potatoes, Green Beans, Carrots, Rolls & Butter, Lemon Squares, Cookies, Brownies.

Our December Section Meeting will consist of dinner at the Cabaret Club & Banquet Center in Harrison, OH followed by a tour of the American Watchmakers - Clockmakers Institute. The AWI is a not-for-profit trade association dedicated to the advancement of horology. Horology is the study of the art and science of time. The Institute provides extensive educational and technical services to its members. After a brief presentation by Mr. Gary Richards, we will tour their facility and learn all about the future of horology in America. We will see the training facility where classes are given in all phases of Watchmaking and Clockmaking repair. Like many other skilled trades, this industry also needs skilled craftsmen to continue the profession.

We will tour the Henry B. Fried Library which is considered to be one of the finest horological libraries in the world. The collection includes rare volumes and unpublished research materials which are invaluable to the study of time. We will finish the tour by visiting the Orville R. Hagans Museum. It is truly a study of time and includes many early time keeping devices as well as priceless timepieces acquired or donated to the museum.

NOTE: ATTENDANCE IS LIMITED ON THIS TOUR TO THE FIRST 20 TO 25 PEOPLE TO MAKE A RESERVATION!!! SPOUSES ARE WELCOME TO ATTEND!!

Please call the Cincinnati Section Voice Mailbox at 513-629-9380, by **Noon, Tuesday, December 2, 2003** if you plan to attend. Please leave your **Name, IEEE Member Number**, and **a daytime telephone number**. You may also make a reservation by e-mailing our Arrangements Chair, **Charlie Nash**, at cnash@ieee.org.

Directions: The Cabaret Club & Banquet Center is located at 9660 Dry Fork Road. Go West on I-74 toward Indianapolis and take the Dry Fork Road exit- Exit #3. Turn right onto Dry Fork Road. The Cabaret Club and Banquet Center is located about 1 mile off I-74. The AWI is at 701 Enterprise Drive, which is across the street from the Cabaret Club & Banquet Center.

CHAIR'S MESSAGE

by Fred Nadeau, Section Chair

I would like to thank all the members who participated in the senior member workshop on October 25th. The workshop was extremely successful and hopefully we will be able to induct several new senior members into our

section this year. I hope more of you will follow your comrades in the next workshop where senior members assist you in polishing your resume and completing your senior membership application.

Our last section meeting featuring PC firewall and antivirus security for home and business, presented by Mr. Matt Scherocman of PCMS Secure Network Group representing Microsoft, Inc, was very well received. I would like to thank Mr. Scherocman for a superb presentation and his expert advice in response to the multitude to questions posed by attendees. He also handed out several door prizes which many lucky attendees found very useful in their home PC applications. We presented Matt with a Section designed desktop acrylic plaque, engraved with the IEEE logo and his presentation title and name. We decided earlier this year to design a special Section plaque which we are presenting to each speaker at our monthly technical meetings.

Fred Nadeau, Section Chair

E-mail: f.nadeau@ieee.org

Phone No. 937-289-2800

NEW MEMBERS

The following individuals are IEEE members who are new to our Section:

Thomas H. Bengal	Thomas N. Lee
Zachary J. Bortolot	Chad R. Martin
Matthew J. Brackett	Logan P. Miller
Rajani Duggi	Pradeep K. Mohanty
Brett C. Elliott	James P. Shannon
Todd M. Hartman	Rachmawati Wangsaputra

We wish to welcome these new members to our Section!!!

Faculty Job Opportunity at UC/CAS

**University of Cincinnati
College of Applied Science**

Department of Electrical and Computer Engineering Technology

The ECET department invites applications for two tenure track positions for Electrical and Computer Engineering Technology assistant professors contingent on funding. The department offers the Associate and Bachelor degrees in Electrical Engineering Technology and the Bachelor degree in Computer Engineering Technology. Responsibilities include developing and teaching lecture and laboratory courses in both day and evening programs. Courses offered include programming languages, computer architecture, computer networks, operating system administration, embedded systems, DSP, control systems, analog and digital electronics, communications, PLC's and electric machinery. Minimum requirements include a master's degree in electrical or computer engineering or engineering technology, three years relevant full time industrial experience, teaching experience and demonstrable communications skills. PhD and professional registration are plusses. The positions will be available for Fall, 2004. Review of applications will begin December 1, 2003 and will remain open until filled. Candidates from industry or engineering and engineering technology programs

are encouraged to apply. Applicants that are not United States citizens must demonstrate fluency in English and possess appropriate visa status.

Applicants should send a letter of application, resume/vita, to include the name, address, telephone number and email address of four references to Search Committee, Elvin Stepp, Department Head, University of Cincinnati, College of Applied Science, 2220 Victory Pkwy, Cincinnati, OH, 45206-2839 or to: elvin.stepp@uc.edu.

Scanning the Past: A History of Electrical Engineering from the Past

Submitted by Dick Reiman, Historian

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Michael I. Pupin

The first issue of the PROCEEDINGS OF THE INSTITUTE OF RADIO ENGINEERS (IRE) was published 80 years ago this month. Michael I. Pupin, a professor of electromechanics at Columbia University, authored the first paper in this first issue, a paper that discussed how to determine the radiation resistance of an antenna. A Serbian immigrant, Pupin already had achieved exceptional economic success as an inventor, and was the mentor of such pioneers in radio as Alfred N. Goldsmith and Edwin H. Armstrong.

In his paper, Pupin stated that there were two ways to determine radiation resistance: through the use of mathematical analysis or by experiment. He noted that it was "extremely difficult" to obtain a solution of the radiation law of a complex antenna using electromagnetic theory. As an alternative, he suggested an experimental method similar to that which he had used in measurements of alternating current circuits. His method employed a version of the Wheatstone Bridge, which he believed would give a fairly accurate value for radiation resistance if it was large compared to other resistances in the coupling circuit between the source and the antenna. Alfred Goldsmith commented that the Pupin paper provided a good example of the transfer of ideas from one field of research to another.

Pupin was born in 1858 in the small village of Idvor, which later became part of Yugoslavia. His early education was in Idvor and a nearby town, and he worked in summers as a herdsman. In 1873, he was sent to Prague to continue his education, but he left for America in 1874 soon after the death of his father. He arrived almost penniless and did farm work and then worked in a cracker factory while learning English and taking advantage of access to the Cooper Union Library in New York City. In 1879, Pupin enrolled at Columbia University, from which he graduated in 1883, becoming a U.S. citizen the same year.

Pupin received graduate fellowships that enabled him to study at Cambridge University in England and at the University of Berlin in Germany, where his teachers included Hermann von Helmholtz and Gustav Kirchhoff. He received his doctorate at Berlin in 1889 and then returned to Columbia, where he taught in the Electrical Engineering Department until his retirement in 1931. He did research on electrical power apparatus and X-ray tubes during the 1890s. In 1900 he obtained patents on loading coils for the improvement of telephone communication, and sold the U.S. rights to the American Telephone and Telegraph Co. for \$455 000. He also sold the European rights to the invention to the German firm, Siemens and Halske. He received 34 patents in all, several of the later ones being in the field of radio.

Pupin was an active member of both the IRE and the American Institute of Electrical Engineers (AIEE), serving as President of the IRE in 1917 and as President of the AIEE in 1925. He received the Edison Medal of the AIEE in 1920 and the IRE Medal of Honor in 1924. His popular autobiography, From Immigrant to Inventor, received the Pulitzer Prize in 1924. He also wrote The New Reformation (1927) and Romance of the Machine (1930), as well as many technical papers. He died in New York City in 1935.

TO SUBSCRIBE TO THE ELECTRONIC NEWSLETTER

This newsletter is only available via e-mail or the Section's web page at <http://ieee.cincinnati.fuse.net/> with the exception of new Section members (one issue only) or members who have specifically requested a copy be delivered through the U. S. Mail.

If you are a new Section member and would like to get this newsletter electronically, please contact Bob Morrison (Editor) at **513-287-3697** or by e-mail at j.r.morrison@ieee.org. Provide your name and member number. In case there are questions, please include a daytime telephone number as well.

If you would like the "Snail Mail" version, you must contact Bob Morrison via the above means or call the Section's voice mail at **513-629-9380**.

IEEE NEWS

U.S. EE Unemployment Moves Upward As Thousands of Non-U.S. Workers Continue to Flood the Job Market

WASHINGTON (October 14, 2003) - Although the unemployment rate for all workers fell slightly in the third quarter, the rate moved in the opposite direction for U.S. electrical and electronics engineers (EEs), according to data compiled by the Department of Labor, Bureau of Labor Statistics (BLS).

The jobless rate for EEs rose from 6.4 percent in the second quarter to 6.7 percent in the third, while the rate for all workers fell from 5.6 percent to 5.5 percent. At the same time, the number of employed EEs fell by 37,000 (from 386,000 to 349,000).

The 6.7 percent figure is more than six times as high as it was in 1997 (1.0), and more than five times as great as 2000 (1.2). The EE unemployment rate reached an all-time high of 7.0 in the first quarter of 2003.

Despite continuing high levels of EE unemployment, the government has issued more than 900,000 H-1B visas in new, renewal and exempt categories since FY 2000, many of them in high-tech fields.

"We're pleased that Congress allowed the annual H-1B cap to drop to 65,000 earlier this month, but U.S. EEs are still competing for scarce jobs in an artificially saturated labor market," IEEE-USA President-Elect John Steadman said. "In addition, demand is shrinking as high-tech jobs are outsourced overseas. Despite the bleak employment outlook, some H-1B proponents are still calling on Congress to increase the number of visa exemptions."

Among other high-tech professionals, the unemployment rate jumped for computer hardware engineers (5.7 percent to 6.9), computer software engineers (4.1 to 4.6), and network and computer systems administrators (5.6 to 7.6). The rate fell for computer scientists and systems analysts (5.6 to 4.8), computer programmers (7.5 to 7.1), and network systems and data communications analysts (5.5 to 5.0).

The third-quarter jobless rate for mechanical engineers rose slightly from 3.1 percent to 3.3 percent, while the rates for civil engineers (3.9 percent) and industrial engineers (5.9 percent) remained the same.

CURRENT VERSION OF IEEE-USA's "TODAY'S ENGINEER" NOW AVAILABLE

The most current version of IEEE-USA's "Today's Engineer" can be found at <http://www.todaysengineer.org>. Included in this issue is:

Backscatter: Accidents Waiting to Happen

Why do systems fail when they shouldn't? Is it because designers are not aware of preceding failures, or because they are willing to accept the risks based on prior successes? <http://www.todaysengineer.org/oct03/backscatter.asp>

On the Road to a Great Presentation

Regardless of how polished your presentation may be, it will surely fall flat unless you connect with your audience. How do you get there? <http://www.todaysengineer.org/oct03/presentations-p1.asp>

Who Wants to Be a Millionaire?

As a recent graduate and new hire, what can you do now to know you'll have a million bucks in the bank when you retire? <http://www.todaysengineer.org/oct03/millionaire.asp>

Voting Technologies -- The Issues Go Beyond Punch Card Ballots and Lever Machines

The Help America Vote Act has prompted many state governments to consider moving to electronic voting technologies. Some experts believe that, eventually, this trend will involve the Internet. Are we improving the voting system or opening a can of worms? <http://www.todaysengineer.org/oct03/voting.asp>

Data Mining and Privacy Issues

Gathering information by looking for hidden relationships in data is generating considerable debate both on Capitol Hill and among the public. With so much information gathered and stored by companies and the government, how can we retain our privacy? <http://www.todaysengineer.org/oct03/data-mining.asp>

Also in this issue:

Engineering & Pop Culture: Movie Technology

World Bytes: Reflections on the Résumé

Capitol Shavings: Should Gov't Work Be Contracted Out to the Private Sector?

Book Review: The Politics of Globalization

IEEE-USA News: H-1B Visa Issue Won't Go Away... plus more

"IEEE-USA TODAY" -OCTOBER 2003

IEEE-USA OFFSHORING TESTIMONY AVAILABLE ON C-SPAN WEBSITE

Dr. Ron Hira, chair of IEEE-USA's R&D Policy Committee, delivered testimony before the House Small Business Committee on the offshoring of high-skilled jobs. Aired on C-SPAN on Oct. 19, the hearing is now available through C-SPAN's video library. Visit www.c-span.org to watch a streaming video of "House Cmte. on Movement of U.S. Jobs to Overseas."

For more information, go to: <http://www.ieeeusa.org/releases/2003/102003pr.html>

U.S. EE UNEMPLOYMENT RISES IN 3RD QUARTER

Although the unemployment rate for all workers fell slightly in the third quarter, it moved in the opposite direction for U.S. electrical and electronics engineers (EEs), according to the U.S. Department of Labor (DOL), Bureau of Labor Statistics. The jobless rate for EEs rose from 6.4 percent in the second quarter to 6.7 percent in the third, while the rate for all workers fell from 5.6 percent to 5.5 percent. At the same time, the number of

employed EEs fell by 37,000 (from 386,000 to 349,000). Read more about it at <http://www.ieeeusa.org/releases/2003/101403pr.html>

IEEE-USA URGES U.S. MEMBERS TO VOTE IN IEEE ELECTIONS

The IEEE's annual elections are right around the corner. U.S. IEEE members vote to fill the offices of IEEE-USA President-Elect and Member-at-Large on IEEE-USA's Board of Directors. Make sure your career and public policy concerns are represented -- remember to vote. To learn more about the IEEE-USA candidates, visit

<http://www.ieeeusa.org/elections/index.html>

IEEE-USA APPLAUDS CONGRESS FOR ALLOWING H-1B CAP TO DROP

At midnight on September 30, the H-1B visa cap dropped back to 65,000 for FY 2004, but important protections for U.S. high-tech workers also expired. While applauding Congress for allowing the H-1B visa cap to drop to its historical level of 65,000, IEEE-USA believes the \$1,000 visa application fee, H-1B-dependent attestations, and the DOL's limited authority to investigate H-1B fraud and abuse need to be renewed and strengthened. For more information, go to <http://www.ieeeusa.org/releases/2003/093003pr.html>

IEEE-USA RECOMMENDS ELECTRIC GRID INVESTMENT, IMPROVED COMMUNICATION, CONSISTENCY

On August 29, IEEE-USA's Energy Policy Committee(EPC) submitted written recommendations for improving the nation's electric power system reliability to the House Energy and Commerce Committee, to help prevent future grid failures like the devastating blackout that affected the United States and Canada in August. The EPC recommended that the U.S. government and the electric industry should increase investment in our nation's electric grid; improve its communications capabilities; and provide for consistency of operating rules. Read details at <http://www.ieeeusa.org/releases/2003/092403pr.html>

IEEE-USA RECRUITS FOR 2005 GOVERNMENT FELLOWSHIPS

IEEE-USA is seeking applicants for Congressional and Engineering & Diplomacy Fellowships in 2005. Congressional Fellows spend a year working for a Member of Congress or congressional staff, often taking on both technical and non-technical issues. Engineering & Diplomacy Fellows select an assignment to a specific office or bureau with the U.S. Department of State, serving as a technical adviser on such topics as non-proliferation, international information policy, nanotechnology, and related foreign policy issues. Fellows receive a stipend of \$50,000, plus relocation assistance, and are required to participate in a two-week orientation session organized under the auspices of the American Association for the Advancement of Science. Applicants must be U.S. IEEE members in good standing, U.S. citizens, and have the requisite degrees or experience. Diplomacy Fellows are also required to have or obtain a security clearance. Application deadlines for the 2005 Fellowships are February 23, 2004. For more information, see: <http://www.ieeeusa.org/forum/GOVFEL/index.html>

WISE SEEKS INTERNS AND FACULTY-ADVISOR FOR SUMMER 2004 PROGRAM

The Washington Internships for Students of Engineering (WISE) is accepting applications from U.S. IEEE student members who have completed two years of undergraduate engineering or computer science to spend 10 weeks next summer in Washington (June 1 - Aug. 4, 2004) learning how the U.S. government makes technology-related policy. WISE is also seeking an outstanding faculty member, or engineer with strong policy and previous academic experience, to serve as Faculty-Member-in-Residence for the 2004 program. For more information, see: <http://www.wise-intern.org>

Each year, participants in the Washington Internships for Students of Engineering (WISE) prepare research papers on a technology policy topic of interest. These papers are collected in the WISE electronic "Journal of Engineering and Public Policy." Included in this year's edition are three papers presented by the IEEE's WISE Interns. Jennifer Christensen, of the South Dakota School of Mines & Technology, wrote on "Solving the Cyber Security Problem: The Role of the Department of Homeland Security." M.I.T.'s Tricia Um wrote on "Making the Six Million Dollar Man: The Federal Government's Role in the Commercialization of Neural Prostheses." And, Kathleen Young, from the University of South Carolina, wrote on "U.S. Radio Spectrum Policy: A Political and Technological Perspective." Other papers touch on a range of topics from K-12 education to the future of the nuclear workforce. Go to the 2003 Journal of Engineering & Public Policy at: <http://www.wise-intern.org/journal03/index.html>

*LATEST TECHNOLOGY POLICY NEWS COVERED IN *IEEE-USA EYE ON WASHINGTON**

For the latest on the prospects for the energy bill, Senate action on a bill to prevent discriminatory use of genetic information, House Small Business Committee hearings on implications of high-tech outsourcing, go to the 20 Oct. edition of the biweekly e-zine at <http://www.ieeeusa.org/forum/EYEONWASHINGTON/03eow16.html>.

Four U.S. IEEE Members to Receive Nation's Top Technology Medal

WASHINGTON (November 4, 2003) - Four U.S. IEEE members, all involved with LED technology, will be awarded the National Medal of Technology on November 6. President George W. Bush will make the presentations in a White House ceremony.

Nick Holonyak, Jr., an IEEE Fellow who built the first LED (light-emitting diode), will receive the award along with two of his former graduate students, M. George Craford and Russell Dean Dupuis. Calvin H. Carter, whose work in silicon carbide advanced LED technology, will also receive the medal.

Holonyak built the first LED in 1962, creating the technology that spawned a multi-billion dollar industry. He is one of only 13 Americans who has received both the National Medal of Technology and National Medal of Science, the latter awarded in 1990. "I received the medal of Science from the first President Bush and now the Medal of Technology will come from the second President Bush," said Holonyak, an IEEE Medal of Honor winner who has been a professor at the University of Illinois in Champaign since 1963.

Craford, chief technology officer of LumiLeds Lighting, made the first yellow LED in 1972. He is currently involved in developing high-brightness LEDs. Dupuis is chair of the electro-optics department at the Georgia Institute of Technology. He was the first to demonstrate that metalorganic chemical vapor deposition could be used to grow semiconductor films, a technique that is now used to produce LEDs and thin-film semiconductors. Both men were graduate students under Holonyak.

Carter's innovations of silicon carbide and related semiconductor material created the foundation material now used for blue and green LEDs, as well as wide bandgap semiconductors. He formed Cree Inc. in 1987 and won several Department of Defense Small Business Innovative Research contracts.

The National Medal of Technology is the highest honor bestowed by the president to America's leading innovators. The award was first presented in 1985 and is designed to "recognize technological innovators who have made lasting contributions to enhancing America's competitiveness and standard of living."

Two U.S. IEEE Members to Receive Nation's Top Science Medal

WASHINGTON (November 4, 2003) - Two U.S. IEEE members will be honored by President George W. Bush with the National Medal of Science in a White House ceremony on November 6. The medal is the nation's highest scientific honor.

Leo. L. Beranek, an IEEE Fellow and acoustic specialist whose company helped create the Internet, was awarded the medal for engineering. Richard L. Garwin, an IEEE Life Senior Member whose work helped pave the way for magnetic resonance imaging (MRI) systems, won the physical sciences medal.

Beranek began working in acoustics early in World War II, helping develop microphones that could be used in conjunction with oxygen masks used before cockpits were pressurized. After the war, he co-founded the acoustics lab at the Massachusetts Institute of Technology, working with architects who built the United Nations' building.

Beranek began a business, "Bolt, Beranek and Newman," which developed mufflers for jet engines, among other jobs. He worked with authorities to establish rules forcing aircraft manufacturers to use mufflers, drastically reducing noise levels. "That did more good for people of the world than anything else I've ever done," Beranek said.

Recognized for acoustics, Beranek's company helped create a technology that has had an impact on many people throughout the world. "BBN had the best software people, and we beat out everyone for an ARPA contract, so we were the founders of the Internet," Beranek said. (ARPA is the forerunner of DARPA, the Defense Advanced Research Projects Agency.)

Garwin, an IBM Fellow Emeritus, began working with magnetic resonance shortly after he joined IBM in 1952. Though the technology didn't work for its original application (computer memory) magnetic resonance is now a mainstay of the medical field. Garwin also did extensive work in superconductors, gravity waves and particle physics, and with both liquid and solid helium. He also helped develop laser printers, touch screens and satellite reconnaissance techniques.

U.S. IEEE MEMBERS ELECT PRESIDENT, 2005; MEMBER-AT-LARGE, 2004-2005

IEEE-USA NEWS November 7, 2003 - The results of the IEEE's 2003 annual election have been tallied, and U.S. IEEE members have elected Gerard A. Alphonse to serve as IEEE-USA President in 2005. Alphonse, an engineering consultant and retired program manager at Sarnoff Corporation in Princeton, NJ, is an IEEE Fellow and currently serves as IEEE Region 1 Director. An accomplished innovator, Alphonse has co-authored more than 120 technical papers and holds 50 U.S. patents. Throughout his career in industry, he has made significant contributions to cryogenics, holographic storage, acousto-optics, ultrasonic transducers, optical recording, tiled displays, and photonics -- where he invented and led the development of the world's highest performance superluminescent diode, a key component in fiber optic gyroscopes, low coherence imaging and external cavity lasers. Alphonse is equally suited to the world of academia, having served as adjunct faculty in the Electronic Physics Department at LaSalle University's Evening Division for 16 years, four of which he spent as Department Head.

During his term as IEEE-USA President-Elect and President, Alphonse hopes to:

- Enhance IEEE-USA's visibility and image among U.S. IEEE members, and its presence among government bodies

- Balance the expansion of the U.S. workforce with the protection of U.S. IEEE members through services, retraining and avoiding obsolescence
- Increase the role of young professionals, women and minorities in engineering and as IEEE leaders
- Continue to promote legislation that creates more U.S. jobs, maintains pension portability and workers' benefits, and gives engineers more rights to their intellectual property

Alphonse will assume the role of president-elect on January 1, 2004, and will work with 2004 President John W. Steadman and current President James V. Leonard.

The IEEE's U.S. members also selected Gary E. Johnson to serve as IEEE-USA Member-at-Large, 2004-2005. Johnson, a licensing negotiator for Thomson Licensing S.A. in Austin, Texas, will also take office on January 1, 2004.

Congratulations and good luck to our new officers!

For more information, and complete results of the IEEE annual election, please visit: <http://www.ieee.org/organizations/corporate/candidates.htm>

Please note that these election results, as tallied by the IEEE Tellers Committee on Nov. 6, 2003, are unofficial until the IEEE Board of Directors accepts the Report of the IEEE Tellers Committee at its Nov. 16, meeting. In 2003, there were no Constitutional Amendments, and there were two survey questions. A total of 246,731 ballots were mailed; 37,233 valid ballots were returned. The rate of return was 15.09 percent.

CURRENT VERSION OF IEEE's "THE INSTITUTE" NOW AVAILABLE

The most current version of IEEE's "The Institute" can be found at <http://www.ieee.org/theinstitute>. Included in this issue is:

W. Cleon Anderson Selected as IEEE President-Elect

W. Cleon Anderson has been selected as the 2004 IEEE President-Elect, pending acceptance later this month of the Teller Committee's report by the IEEE Board of Directors. Anderson will begin serving as IEEE President on January 1, 2005. Read more about the election at http://www.theinstitute.ieee.org/inst_art.jsp?isno=11031&arnumber=11031_11w.newselection§ion=5

Member Digital Library Expands

The IEEE Member Digital Library now offers subscribers access to all articles from IEEE journals, conference proceedings, and magazines that are available through IEEE Xplore, some dating back to 1950. Previously, subscribers could access only the past five years of articles. Read more at http://www.theinstitute.ieee.org/inst_art.jsp?isno=11031&arnumber=11031_11w.productsmdl§ion=11

Seeking Mentors for Design of Future City

Engineers are needed to mentor students participating in the annual Future City Competition. Sponsored as part of U.S. National Engineers Week 2004, which will take place February 22-28, the competition calls for teams of students to simulate the design of a city and then build a model of it. Find out how you can volunteer to mentor at http://www.theinstitute.ieee.org/inst_art.jsp?isno=11031&arnumber=11031_11w.newsmentors§ion=41

Boston Group Mixes Fun with Fundamentals

Paintball tournaments, ski trips, and major league baseball games typically are not part of IEEE meetings. But the Boston Graduates of the Last Decade Affinity Group isn't your typical group, either. They have found a way

to increase their meeting attendance by mixing fun with the fundamentals. Find out how at http://www.theinstitute.ieee.org/inst_art.jsp?isno=11031&arnumber=11031_11w.gold§ion=4

Web Site Explains Benefits of Membership

If you're trying to recruit new members, but struggle to explain all the benefits of the IEEE, the new "Join IEEE" Web site can help you. The site explains IEEE services and benefits, spells out the organization's scope and value, and describes the organization's 38 societies. Learn more at http://www.theinstitute.ieee.org/inst_art.jsp?isno=11031&arnumber=11031_11w.newsjoinsite§ion=5

Marketplace of Ideas: Honorable Mention

When colleges and universities hand out doctorates to actors, singers, and even puppets -- Southampton College, N.Y., USA, awarded a popular television puppet, Kermit the Frog, a doctorate of amphibious letters in 1996 -- does it minimize the accomplishments of others more worthy of receiving honorary degrees or of students earning their Ph.D.s after years of study and research? Weigh in at http://www.theinstitute.ieee.org/inst_art2.jsp?isno=11031§ion=20

Deadline for Fellow Nominations Coming

The deadline to submit nominations for IEEE Fellow is March 15, 2004. To make it easier to nominate someone, the paperwork can now be submitted electronically through a new feature called the Electronic Fellow Nomination Process. Find out how at http://www.theinstitute.ieee.org/inst_art.jsp?isno=11031&arnumber=11031_11w.deadlinesfellows§ion=2

13 Tips for Shipping Gifts

How the gifts are packed can determine whether or not they arrive in good shape and on time for the holidays. Here are some shipping tips from Airborne Express, an express shipping company endorsed by the IEEE. Read more at http://www.theinstitute.ieee.org/inst_arch.jsp?isno=11031§ion=7

NEWS FROM IEEE EDUCATIONAL ACTIVITIES AND THE HISTORY CENTER (November 2003)

THE IEEE VIRTUAL MUSEUM CONTINUES TO GAIN VISITORS AND PRAISE.

Designed to teach the general public—and particularly the pre-university crowd—about IEEE technologies and their social and historical importance, the IEEE Virtual Museum (VM), which opened in 2002, continues to draw thousands of users monthly and to attract critical praise. The newest exhibit, Women & Technology, opened in June 2003 to rave reviews. The two most recent awards for the VM were to be named one of the "Best Sites for Kids" by the prestigious American Library Association and to make PC Magazine's "Top 101" list. PC Magazine named the IEEE VM one of the "Top 101 Most Incredibly Useful Sites" of 2003. The museum was among the eight sites chosen in the "Computing – Everyone " category. The review called it a "fascinating, engaging, image- and infographic-laden site" where "you'll discover the stories behind your favorite electrical engineering marvels." For more information on the list, go to <http://www.pcmag.com/category2/0,4148,7488,00.asp>. You can visit the IEEE Virtual Museum yourself at <http://www.ieee.org/museum>. Be sure to look for the next exhibit on technology and World War II, opening in December 2003.

MENTORS NEEDED FOR STUDENT TEAMS COMPETING FOR THE VINNY™ AWARD

IEEE in cooperation with the NASA Center for Distance Learning and Christopher Newport University announce the VINNY™ award. Named in honor of Leonard da Vinci, a man famous for the creative use of science, technology, engineering, and mathematics to solve human problems, designed to help heighten and increase awareness of science, technology, engineering, and mathematics (STEM). VINNY is a global video competition. Teams made up of one teacher and three students will identify and research a global problem and

discover ways that STEM can help solve it. Teams will combine skills in research, writing and creativity. It's what you do for a living. Be a mentor and share the wealth of your experience with young learners. You can mentor your team on-line. The final product to be submitted for judging is a one-minute video explaining the global problem and a possible STEM solution. Grade levels: elementary grades 3-5, middle grades 6-8, and high grades 9-12. Two languages: English and Spanish. The winning one-minute videos will be exhibited on the NASA's Kids Science News Network™ (NASA's KSNN™) web site (<http://ksnn.larc.nasa.gov>). Register on-line at <http://vinny.pcs.cnu.edu>. Contact Doug Gorham, Ed.D, IEEE Manager of Pre-college Education, at d.g.gorham@ieee.org, if you have questions. Help shape the future. Sign up to be a mentor.

IEEE EAB WORKSHOP: "CONNECTING ENGINEERS WITH THE PRE-UNIVERSITY COMMUNITY"

"Connecting Engineers with the Pre-University Community", sponsored by the IEEE Foundation, the IEEE Life Members Committee, Region 8, and IEEE EAB, brought together twenty-seven volunteers from more than a dozen countries from within IEEE Region 8 to discuss strategies and activities that would connect engineers with pre-university educators and their students. Attendees developed action plans that included a series of steps that would begin or enhance a partnership with their local pre-university community. This event, held in Nice, France from September 26-28, 2003, is part of the ongoing effort of IEEE Educational Activities to share successful pre-university programs and to expand the involvement of IEEE volunteers in enhancing the level of technological literacy of pre-university educators and their students.

At the conclusion of the meeting Nico Beute, from the Republic of South Africa Section summarized the benefits of Section volunteers connecting with their local pre-university community: "The workshop presented a wonderful opportunity to share and to generate ideas on how we can inform school children on the important role engineers play in our world, how engineers improve living conditions all over the world and how exiting it is to be an engineer - in that way we also draw more students to an engineering career."

To learn more about the programs IEEE Educational Activities is implementing to enhance the level of technological literacy of the pre-university community and to promote engineering and other technical professions, please visit <http://www.ieee.org/organizations/eab/precollege>.

IEEE EDUCATIONAL ACTIVITIES BOARD ANNOUNCES THE 2003 AWARD RECIPIENTS

The IEEE Educational Activities Board (EAB) has announced recipients of its 2003 EAB Awards. The official EAB Awards Reception and Presentation was held on November 14, 2003 during the IEEE Fall Meeting Series at the Renaissance Seattle Hotel, in Seattle, Washington. One award was presented on November 8, 2003 at the IEEE Frontiers in Education (FIE) Conference Awards Banquet at the Westin Hotel in Westminster, Boulder, Colorado.

The IEEE EAB awards recognize and honor individuals, companies and IEEE Sections for major contributions to education in the areas of accreditation, continuing education, educational innovation, pre-college education, meritorious service to the IEEE EAB, professional development and related achievements that advance the practice of engineering and of engineering education that are germane to the mission of the EAB. Further information is provided on the web at <http://www.ieee.org/organizations/eab/arc/awards/index.htm>.

Following are the 2003 IEEE EAB Award Recipients:

MERITORIOUS ACHIEVEMENT AWARD IN ACCREDITATION ACTIVITIES

- Dr. Patricia D. Daniels: "for excellence in, dedication to and promotion of the practices and ideals of engineering accreditation and service to IEEE and ABET accreditation bodies worldwide"
- Professor Gerald L. Engel: "for fundamental and lasting contributions to computing sciences accreditation activities"

MERITORIOUS ACHIEVEMENT AWARD IN CONTINUING EDUCATION

- Dr. Daniel Berg: "for a lifetime of contributions to the education of working professionals through his leadership in the establishment and growth of innovative distance learning programs and through his distinguished teaching in such programs"
- Professor John R. Bourne: "for work in creation of the Sloan Consortium, an organization dedicated to making education a part of everyday life, accessible and affordable for anyone, anywhere, at any time"

MAJOR EDUCATIONAL INNOVATION AWARD

- Professor Rao R. Tummala: "for reforming Microsystems Packaging education by unparalleled, systematic and innovative approaches to courses, curricula, tracks, books, degrees and conferences while mentoring and catalyzing other centers of excellence around the world"

EMPLOYER PROFESSIONAL DEVELOPMENT AWARD

- Saudi Aramco: "for outstanding contributions to employee continuing education and professional development through effective integration of diverse technologies to meet the needs of rapid modernization of engineering technologies"

SECTION PROFESSIONAL DEVELOPMENT AWARD

- Argentina Section: "for remarkable contributions in continuous education activities, with sustained growth in number, variety and geographical coverage, for the benefit of the technical community"
- Houston Section: "for sustained, outstanding contributions in the development, implementation and delivery of a large number and variety of industrially oriented continuing education programs"

CALL FOR 2004 AWARD NOMINATIONS

The IEEE Educational Activities Board is accepting nominations for the 2004 IEEE EAB Awards listed below. Complete information and nomination forms will be provided by December 1, 2003 on the IEEE EAB Awards web site at <http://www.ieee.org/organizations/eab/arc/awards/callnominations.htm>.

The deadline for nominations is April 30, 2004. Award names and descriptions are provided on the web at <http://www.ieee.org/organizations/eab/arc/awards/descriptions.htm>.

THE IEEE HISTORY CENTER ANNOUNCES ITS 2004 CONFERENCE AND STUDENT PAPER COMPETITION

The IEEE History Center's unique work in bringing together engineers, social scientists, humanists, hobbyists and others to discuss mutually interesting aspects of engineering history is not limited to the Rutgers campus. Every two or three years we hold an international workshop in the same vein. The 2004 IEEE Conference on the History of Electronics (CHE2004) will be the fifth in this series of workshops. The occasion is the centennial of the Fleming diode, and the profound role electronics have had in shaping the modern world, from Fleming's invention to the present, makes this an important topic of historical study. This workshop will be held at the historic Bletchley Park in the United Kingdom. This is an ideal site for such a meeting with conference facilities in the Victorian mansion and historical exhibits there and elsewhere in the park-like grounds. It is also an appropriate site, as it was here during World War II that the transition from electromechanical to electronic computing was made in the effort to decrypt intercepted messages. This conference will feature a worldwide Student History Paper Contest, with an opportunity for IEEE Student members and their Student Branches to benefit from doing historical research. Full information on the conference and contest are available at http://www.ieee.org/organizations/history_center/Che2004/index.html.

THE IEEE HISTORY CENTER SPONSORS A NEW LECTURE SERIES AT RUTGERS.

Rutgers, the State University of New Jersey and co-sponsor of the IEEE History Center, is a large research university where the engineers and the social scientists and humanists do not always have opportunities to interact. Therefore, in 2003 the History Center inaugurated a series of lectures on engineering and society, where we partner with other organizational units from the University to bring in interesting speakers to address topics of interest to both the technologist and the layperson. Subjects so far have included the life of IBM's Tom Watson, Sr., by a noted science journalist and biographer, and the role of electronics in modern music by a composer who worked with Robert Moog at the beginning. Information on the series can be found at http://www.ieee.org/organizations/history_center/lecture_series.html.

MARCONI'S EARLY WIRELESS EXPERIMENTS, 1895, IN SALVAN, SWITZERLAND, DEDICATED AS AN IEEE MILESTONE

The IEEE History Center's program most closely geared to IEEE Sections is the Milestones in Electrical Engineering and Computing. A section proposes a local achievement of significance, prepares a carefully documented nomination, and, if approved by the IEEE History Committee and IEEE Executive Committee, dedicates a bronze plaque recognizing the honor. Milestones enable a Section to demonstrate to the local community that presence and importance of engineers in the history and present of the region. Bletchley Park, where the conference will be held, was dedicated as a Milestone earlier in 2003. At the most recent Milestone dedication in the IEEE Switzerland Section in September 2003—which brought the total number of Milestones to 51—dignitaries included IEEE Past President Ray Findlay and the President of the Swiss Federation. Information on the program can be found at http://www.ieee.org/organizations/history_center/milestones_program.html

ABOUT IEEE EDUCATIONAL ACTIVITIES

The IEEE Educational Activities Board is responsible for coordinating the educational activities of the IEEE. The volunteer and staff members of IEEE Educational Activities carry out this responsibility by developing educational programs to ensure (1) The technological literacy of pre-college students, (2) the continuous maintenance and improvement of engineering education programs through active participation in accreditation activities, and (3) the development of continuing education products and services that serve the professional development and lifelong learning needs of electro-technology professionals worldwide. For more information, visit <http://www.ieee.org/organizations/eab/> or email education-services@ieee.org.

ABOUT THE IEEE HISTORY CENTER

The IEEE History Center is a staff unit of IEEE that is located not at the IEEE Operations Center, but on the nearby New Brunswick campus of Rutgers, the State University of New Jersey, which cosponsors the Center's activities. The Center's mission to preserve, research, and promote the legacy of IEEE technologies is overseen by the IEEE History Committee, a standing committee of the IEEE Executive Committee. Since most of the activities in carrying out this mission are educational in nature, the Staff Director of the History Center reports to the IEEE Managing Director for Educational Activities, and Center staff work closely with EAD staff on many programs. Those interested in more information are invited to look at the Center's website http://www.ieee.org/history_center or to email the Center at history@ieee.org.

IEEE-USA Seeks Law Barring Genetic Discrimination

WASHINGTON (November 17, 2003): IEEE-USA is calling on Congress to restrict the use of genetic and related health information in hiring decisions. Though the availability of genetic information is growing, there are no laws to prevent employers from using this data to screen out prospective employees with genetic predispositions to certain diseases in order to hold down employers' insurance costs.

Congress has debated the issue of genetic discrimination for nearly a decade. In October, the U.S. Senate passed S. 1053, "The Genetic Information Nondiscrimination Act." However, unless the House acts on similar legislation this year, the issue could carry over into 2004 election-year politics.

IEEE-USA is encouraging prompt action to restrict employers from requiring health information except in certain cases, and to prevent employers from making hiring decisions based on health information. "We want to make sure technology created by engineers is used ethically and that it benefits society," said Mike McDonald, chairman of the Bioinformatics and Genomics group of the IEEE-USA's Medical Technology Policy Committee.

IEEE-USA holds that genetic information can be used to improve the quality of health care and facilitate personalized medicine. And genetic information is helpful to doctors since it can show a tendency towards certain diseases. But, according to IEEE-USA, the potential for abuse calls for legal limits. As McDonald stated: "This concern is not just with rare diseases. Everyone will have a predisposition to some disease."

IEEE-USA's position statement on "Nondiscrimination in Employment Based on Genetic and Other Health Information" can be viewed at: <http://www.ieeeusa.org/forum/positions/geneticinformation.html>.

The IEEE Cincinnati Section Executive Committee **Member Names and Phone Numbers**

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